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PUERPERAL INFECTIONS (5)

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Badagara.

Treatment : Part I.

In the discussion of the treatment of a disease that has a great tendency to be protean and whose therapeutic measures are legion in number but none of them truly specific, all of them woefully uncertain and a vast majority of them owing their short esteem to the boom of the moment or the bias of the practitioner, it is difficult to appraise the true worth of any, and will be injudicious to exclude one or extol another. Puerperal infection being, par excellence, a disease of this category, we shall discuss its treatment in all its aspects as obtained to-day, and, wherever possible, with special reference to the use of each in mofussal practice, as it is here that the practitioner, equipped as he is but meagrely and forced to depend largely on his own powers of discrimination, finds it hard to choose the right one from the multitudinous medicaments; all alleged to be efficacious, but most, to say the least, losing their charm on test. A word more and we shall have done with the preface. The writer knows only too well that, while to go cross to a current is seeking danger, to go cross to current thoughts is courting disaster; but it is unnecessary to point out that, on occasions, one may have to flirt with either—and, after all, flirtation is livelier and perhaps conduces to happier end-results than log-like floatation.

GENERAL MANAGEMENT.

(1) *General Hygiene.*—This, though it should vary with the varying conditions, should always aim at increasing the comfort and maintaining the strength of the patient and at diminishing the waste and eliminating the toxins in her. Briefly speaking, the room should be well-ventilated, the bed

should be cosy, the visitors should be limited and the attendants should be cheery; the mouth should receive attention, bladder and bowels should not be forgotten; bed-sores should be avoided and skin in general should be attended to; absolute rest should be insisted on, appetite in all ways should be increased, rigors and sweats should be controlled and every thing possible should be done to keep the patient neat and blithe, and to induce the greatest hopes in her. In short, the hygiene of a typhoidal patient should be the hygiene of a puerperal patient. Over and above these, there are one or two points that demand more than a passing remark.

(2) *Postural Drainage.*—A puerperal woman is, more or less, a patient with an abdomino-pelvic wound, and so drainage should be deemed essential. Fortunately, the 'wound' has a natural outlet permitting of free drainage, and all that is needed is to facilitate its functioning. Where the patient's condition allows, for example, in mild sapræmias, she should be encouraged to adopt a partially sitting posture, and, in other cases, she should be instructed to spend some hours a day in 'Sims' or genu-pectoral position. The use of bed-pans and urinals should be limited to strictly necessary cases, and squatting during defecation or micturition may be considered a counsel of perfection, as it aids in promoting the discharge.

(3) *Nursing.*—This is a point that usually demands acute judgment. As a rule, nursing may be permitted in mild cases, while in severe ones it should be prohibited; but each case should be considered an entity in itself.

(4) *Asepsis and Antisepsis.*—In puerperal infections, if care over letting out of toxins is important, care against letting in of organisms is doubly so. For one thing, multiple infections are always difficult to tackle; for another, the imposed one may be more virulent than the one we are trying to get rid of. Moreover, there is no certainty that the attendant will not contract the contagion under namby-pamby methods and play to the tune of, 'The deliverer came to deliver, but was delivered of twins'. Hence, there should be no slip-shods in the treatment of puerperal infections; whatever is done and has to be done should be done under the stern regime of strict asepsis or antisepsis as demanded by the occasion.

DIET

The diet of the patient should receive close attention, and may demand constant alteration. It is impossible to go into the details of it here; all that one can do is to indicate the general principles involved in the choice of it.

Guiding Factors.—A case of puerperal infection being pre-eminently a case of fever, the diet thereof too should be a diet of fever ; and, since any diet of fever should contain a liberal supply of carbohydrates for the very excellent reasons adduced by Doctor Hutchison,* the diet under consideration too should be rich in carbohydrates. Next, by common consent and for well-known reasons, it should be light, fluid or semi-fluid, easily assimilable and nutritious. Any diet, to be practical and really useful, should be agreeable to and agree with the consumer, and its cost should be well within the means of the patient.

The Routine Diet.—A consideration of the above will show that, except where absolute contra-indications exist, light conjee or thin gruel out of the patient's staple cereals with harmless pickles to aid the appetite will perhaps best form the basic diet in puerperal infections. Other articles such as barley or other cereal water, light tea or coffee, and, where conditions allow, cooked bread or crisp biscuits and protein-spare vegetable soups may be made to intermit or combine with one another in a way to avoid tiresomeness and disgust, usual with all rigid and ruled diets.

Milk.—Though it is the simplest and the most nutritious of fluid foods and is generally considered as easily assimilable and physiologically the ideal food for all fever cases, milk can form the staple diet in only a few of the Indian cases of puerperal infections, for it is assuredly a diet of the rich (three pints, the daily minimum according to Hutchison, costing not less that six annas !), is difficult to procure in a pure state except for patients keeping their own cows, disagrees with many, being disagreeable to them and in some cases inducing definite milk-phobia, and, above all, is seldom sterilised and stored properly in spite of all directions. Being, however, a highly nutritious fluid, its use should be liberal wherever possible and practicable. Milk, when prescribed, may be given entire, citrated, or diluted with barley or sago water or other diluents, and perhaps best and most easily with tea or coffee, one or both of which is indispensable to-day; incidentally, it may be remarked that this almost universal addiction to tea or coffee is a blessing in disguise to us, as they serve as admirable vehicles to reach to the system of the "milk-phobics" whatever milk is available or needed. Milk may also be given thickened with other carbohydrates like the meals or flours of cereals; and, where the case is prolonged and tastes demand it and means permit it, the milk may be enriched by the addition of such patents like Mellins' or Benger's or Somatose or Sanatogen.

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* ROBERT HUTCHISON.—*Food and the Principles of Dietetics*, Sixth Edition, 1929, page 480.

Artificial Foods.—These are numerous in the market, and, of these, Panopeptone since a long time past and Glucose with vitamin-D in recent times are the two that have charmed the practitioner. Unfortunately it is the writer's lot to record his painful experiences with either, for, in a series of typhoids where these were exhibited both exclusively and alternately, abdominal troubles arose, the toxæmia increased and the convalescence was late; he has ceased using either, and finds he is in no way worse for it—to be on the side of modesty.

Robert Hutchison, the eminent author already quoted, while discussing the value of artificial foods, says on page 555 of the same book, "In cases of sickness......when appetite is in abeyance, it is often a question not so much of getting the patient to take much nourishment as of persuading him to eat at all. It is then that artificial foods serve a useful purpose, for they can be varied to suit the caprices of the patient, and though the amount of actual nourishment which they yield may be small, they may yet kindle a desire for ordinary foods......Suggestion, in fact, plays a large part in bringing about whatever good results artificial foods are capable of producing." It should be evident from the above, that whatever utility they may have in prolonged affections, they can offer no benefits—to say the least—in acute cases.

On the merits of the peptoned patents themselves the same author observes, "A much more real disadvantage attending the use of peptone preparations is their tendency to produce diarrhoea......Peptone preparations appear to have the power of exciting a secretion of gastric juice and of promoting the appetite in much the same way as the extractives of meat. Their nutritive value therefore is indirect rather than direct, and is to be measured more by their general effect upon the well-being of the patient than by the amount of energy which they supply......Most of these (liquid peptone preparations), contain so much water that their nutritive value is comparatively small, while those in which alcohol is present are open to the same objections as other dietetic or medicinal wines." ("In the first place, they are not worth the price charged for them. In the second place, it is open to grave question whether the ferment of malt (disastase) is not much impaired by the action of the alcohol to which it is exposed when dissolved in a fortified wine, such as port or sherry. The medicated wines are open to the same objection to an even greater extent. The use of such liquors by an invalid on his own responsibility, or even by prescription, exposes him to great danger of becoming by degrees the unconscious victim of alcoholism, and, in the case of the cocoa wines, of the cocaine habit as

well. On every ground their manufacture and sale should be deprecated by the medical profession ".—page 389). And, in a foot-note to the main quotation, the author says, " Analyses by Harrington (*Boston Med. and Surg. Journal*, 1902, clxviii, 283) have shown for example that ' liquid peptonoids ' contain 23 per cent of alcohol by volume, and that the maximum dose for an adult per day would yield as much intoxicant as is contained in 3½ ounces of whisky. ' Panopeptone ' contains 18·95 per cent of alcohol by volume"—(*i.e.*, roughly about 1⅛ fluid drachms per ounce. T. S. P.). The composition of ' Panopeptone, ' according to the author, is : " Water 81, per cent ; Soluble proteins (chiefly albuminods), 3 per cent ; Extractives and other non-protein organic matter, 15 per cent (largely sugar) ; and Mineral matter, 1 per cent.—page 559 ". The author's conclusion is well worth remembering, though it is sad to observe it is problematical how far the suggestion is practicable in our own land under the conditions obtained to day. He says, " Home-made peptonised foods, prepared by aid of such agents as liquor pancreaticus or ' zymine ' are now so well known......Gruels of various sorts can be prepared in a similar way, peptonized milk gruel being one of the best. Such home-made preparations are mostly to be preferred to commercial articles, and also have the advantage of being much cheaper." And shall we add ' fresher and so more whole-some '?

Sugars.—The significance of carbohydrates in fevers has already been mentioned, and, sugar being the most concentrated form of carbohydrates, its importance can readily by understood. It is needless to point out that, in the administration of sugars, glucose or monosaccharides should be exhibited as food and not as a drug. The writer's practice is to prescribe glucose separately, and with directions to mix one tablespoon of liquid glucose with all feeds or medicaments per os, thus bringing the daily consumption to a level of about six ounces. Commercial glucose, being but hydrolysed starch and so perhaps owing its peculiar flavour and taste, is not realished by some patients. In such instances the writer's practice is to substitute in its place syrup of glucose, or use a mixture of honey and glucose in equal parts, one ounce of the mixture being directed to be given separately and 3 or 4 times a day. Fruit juice, especially those of well-ripe and practically sourless oranges and grapes, and the old-fashioned raisin-tea and tamarind-whey, as these contain laevulose or invert-sugar, are other means of reaching glucose to the system, and they have the additional advantages of being relished by the patients and allaying their thirst.

A word about ' glucose with vitamin-D ' is necessary as it has been remarked that, in the writer's experience, it has hindered the progress of

fever cases. Probably, the undesirable effects obtained with this product are to be attributed to its vitamin-D content, and we shall revert to the subject when we are dealing with vitamins in a subsequent section.

Fluids.—The fluid intake of the patient should be unstinted. Plain cooled water is perhaps the best. But, cocoanut-water, fruit-drinks, and, where fancy over-takes, aerated waters—all these are permissible, and may with advantage intermit one another. The use of aerated waters however requires caution. Carbonic acid gas is rapidly absorbed into the blood from the stomach, and in sepsis, where acidosis is already present, it will be well not to run the risk of adding to it. Besides, as Hutchison remarks, "The mechanical distension of the stomach too......may be harmful in dilatation of that organ and in other cases may hamper a weakened heart......The use of mineral waters should also be avoided in cases in which the appetite is much depressed, for the carbonic acid gas, by lowering the sensibility of the stomach nerves, may still further impair the desire for food. It cannot be justly claimed for the aerated waters that they are always sterile. Carbonic acid gas is *not* fatal to organisms, with the exception, perhaps of the cholera bacillus."—(page 310).

Amount and Interval of Feeds.—"Small feeds at small intervals" will be the best maxim. It will be also advisable to instruct the patients to take the most and the best part of her nourishings during the earlier parts of the day, when the fever will be less, and consequently the appetite keener and the digestion better. As regards night feeding, it will be good of us to remember that sleep, real refreshing sleep, is nature's food or elixir to the exhausted, and it will be foolish (to say the least) to over-ride her motherly gifts and force our own, however fraternally we may do the latter. This, as also the understanding that all feeds should be controlled by the real needs of the patient and not by the rules in the schedule, should tell us what to do in a given case.

Modifications in Complications.—All diets will require modifications in the presence of complications. In phlegmasia, milk will have to be used sparingly. In vomiting, this fluid will have to be citrated or diluted with lime water. When diarrhoea sets in, conjee will have to give place to rice-rater, and milk will have to be supplanted by buttermilk; in severer cases, mouth-feeding will have to be reduced to a minimum and the patient will have to be put on plain water and black tea or coffee. Likewise, constipation, albuminuria, frank nephritis and a host of others may demand and will receive appropriate dietetic modifications.

ALCOHOL.

Time was when Chiron and Bacchus were like Damon and Pythias, and then alcohol was a constant in the treatment of fevers. Even as late as the last twenties, it had its sway; since recently, however, with every day passed, it is rapidly losing its charm, and, indeed, the pendulum has begun to swing the opposite way, though the drug has not lost all its hold on the medical profession.

Alcohol owes its hoary popularity in the therapeuties of acute infections to its primary effects on the heart and the brain, its apparent influences on the temperature and tissue-waste, and its suspected powers to increase the tissue-resistance. In chronic infections, it owes its position of a general pull-up to its vinic virtues on the system. It may be well to know how far these agree with the actual findings.*

Alcohol and the Central Nervous System.—" It may be stated at once that there exist two distinct views as to the action of alcohol on the central nervous system: the one stoutly upheld by Binz and his pupils, that alcohol first stimulates and then depresses the nerve cells; the other championed by Schmiedeberg, Bunge and their followers, that it depresses the central nervous system from the beginning. . . . . . . The question has been the subject of many investigations, and as the methods have been developed and the difficulties and complexities have been appreciated, the evidence that alcohol is almost wholly depressant has become more definite, while the supposed stimulant action on the nervous system becomes less probable."—(Cushny).

" ....It is doubtful indeed whether alcohol can be regarded as a nervous stimulant at all......It has been said that alcohol tends to dilate the peripheral blood vessels. This......explains many of the apparently contradictory effects of alcohol on the body. There is reason to believe, for instance, that alcohol tends to anaesthetise rather than stimulate the brain, but by dilating the cerebral blood-vessels it may so flush the brain with blood that intellectual activity may be temporarily increased before the anaesthetic effects have had time to manifest themselves." (Hutchison).

Alcohol and Circulation.—" The pulse is accelerated during the excitement of alcoholic intoxication, but this is due to the increased muscular effort and not to any direct action on the heart......The blood

* For the quotations that follow, the reader is referred to—
A. R. CUSHNY.—*A Text-book of Pharmacology and Therapeutics*, 1928, pp. 184-208.
ROBERT HUTCHISON.—*Food, and the Principles of Dietetics*, 1929, pp. 337-352.

pressure is said to be slightly increased in man in some cases after moderate quantities of alcohol (15-30 c.c.), but in at least an equal number of observations it was found to be slightly reduced, and in many no definite change could be made out (Lieb)......On the whole, the action on the circulation of small quantities of alcohol (½-1 oz) may be favourable in some conditions, but is so slight and inconstant that it is impossible to regard it as a basis on which serious therapeutics can be founded. The slowing of the heart which often follows the administration of alcohol in fever, would seem due rather to its diminishing the cerebral excitement than to its direct action on the heart. "—(Cushny).

"The stimulating action of alcohol upon the heart * is one of the greatest importance. In disease.........when the heart is beating rapidly, but feebly and ineffectually, the effect of alcohol is often to diminish the number of the beats while improving their force, and as long as these effects are being produced in a case of acute illness, one is tolerably safe in assuming that alcohol is doing good .....Parkes and Wollowicz .....found in the case of a man that the administration of from 1 to 7½ ounces of rectified spirit daily raised the pulse-rate by 10 beats per minute, as compared with the period when no alcohol was being taken. They found, moreover, as other observers have found before and since, that this over activity of the heart was followed by a period of depression in which the beat was both slower and feebler than normal. It is important to bear in mind this after-action of alcohol ".—(Hutchison).

Alcohol and Tissue-waste.—This subject is of absorbing interest, but we should touch only the salient features in it, and with sole reference to the role of alcohol in fevers.

It is said that alcohol is freely absorbed by the mucous membrane of the stomach and is at once passed into the blood.† Its ultimate fate in the tissues, however, is as yet surrounded by conjectures, and, perhaps, will continue to do so till we are sufficiently informed of dialysis, surface-tension, ionisation and other physico-chemical phenomena in the animal cells to enable us to know more about the vital processes at cell-surfaces, the cell permeability and similar other features connected with the "exchange" in the cells and metabolism in general. The conclusion, so far reached is "Alcohol is a

* Most physiologists now hold that alcohol has no direct stimulating effect upon the heart—(Hutchison)

† In every-day life, however, the smell of alcohol is noted in the vomit or belching occurring hours after in a person drunk.

protoplasm poison or anaesthetic, but is itself easily burnt up in the body," sparing fat and sometimes carbohydrates, and "leading to the same economy of protein as the ordinary non-nitrogenous constituents of the dietary." * If comparison is permissible, the events may be said to resemble those that may be expected to occur when spirit with water is thrown over a burning wood; the carbon and the other elements in the wood will be spared, but under what conditions and with that after-effects may be readily imagined. It has to be remembered too that, in acute infections, the cells are "damped" and in a state of 'cloudy swelling,' a condition which is often nothing but an early stage of acute molecular degeneration. Under such circumstances—with the cells already in a process of degeneration, and alcohol tending to paralyse them—it is rather difficult to understand how the drug can affect the metabolism beneficially. It is questionable too, if, under such conditions, the cells will have even that energy necessary to bring the heat-producing alcohol to its "ignition-point" for combustion; and, when alcohol is not decomposed, but circulates as such, its effects as a protoplasm poison become manifest.

"The passage of alcohol out of the stomach into the blood is counterbalanced by a flow of water from the blood into the stomach. The 'endosmotic equivalent,' as it is called, of absolute alcohol for animal membrane is 4·13, and this means that for every gramme of alcohol which passes in one direction 4·13 grammes of water pass in the other" (Hutchison). It will be evident from the above that every gr. of alcohol that passes into the cell deprives the latter of 4·13 gr. of its water. It is unnecessary to detail the effects of this 'drying' of the cells; the waste products accumulate, the toxins become concentrated, and both together wither the cells, completing the task begun by alcohol.

The fuel-action of alcohol (when it serves as fuel) is more akin to that of petrol than that of oil. It is never sustained nor centric but always transient and tangential, as the fuel offered burns away rapidly and the heat evolved becomes dispersed widely. And, Hutchison remarks, "......by dilating the surface blood-vessels, alcohol may cause more heat to be lost than it is itself capable of producing. Further, alcohol is rapidly burnt up and the heat which it yields is quickly dissipated."

* The question arises: Is the 'burning' in the body of the 'living' cellular elements the same as the burning of a chemical substance like alcohol? In other words, is there, in the former, a 'vital,' an 'electronic,' a 'living' energy released in addition to the ordinary chemical energy evolved in the burning of alcohol? The question touches the internal metabolism in the cells and incidentally raises the problem, whether the energy liberated by the oxidation of the already absorbed elements in the cell is the same as, or different from, that evolved during the cleavage and the re-synthesis in the assimilation of the intake. A solution to this will solve many a problem in Disease and Defence.

In infections, the cells are already engaged in fighting the toxins, and, in the friction caused, sufficient heat and energy are liberated. Hence, what we want is, not any more heat or energy, but something that will act for or add to the fighting cell elements. Alcohol is capable of neither. It has no effect on the toxins, and it does not form part and parcel of the cell. It may produce some ephemeral energy which is not essential, and this it achieves by encroaching on the harassed cells, and, sometimes, in the process, causes distinct damage to them. With such harms concealed in its seeming virtues, alcohol has little attraction to be used as a tissue-sparer in fevers.

Alcohol and Temperature.—"The temperature of the body falls somewhat after the administration of alcohol, but this is not due to any diminution in the oxidation and in the heat formed, but to the greater output of heat from the dilatation of the skin-vessels. The fall in temperature is comparatively slight, seldom being more than ½-1° C, but it would seem that exposure to cold causes greater fall in the temperature after-alcohol than in normal conditions* ; this is perhaps due to the temperature-regulating mechanism being rendered less sensitive by alcohol ......The fall in temperature produced by alcohol is generally accompanied by a feeling of heat, and a thermometer applied to the skin may actually show a rise of several degrees, because more warm blood flows through the dilated vessels." (Cushny).

It will be observed from the above that in health and where the cells or the heat-centre are not paralysed, alcohol brings about the reduction in the temperature not by arresting the cause of the fever as quinine does in malaria or by abstracting the heat as cold applications do, but by withdrawing the heat-holding blood itself to the "unlocked" surface blood-vessels whence the heat passes out through radiation. It should be evident then, that the lowering of the oral temperature is due to a diminution of the blood in the interior, and that the calories per unit volume of the internal blood are unaltered. Whether such a condition can be considered an advantage is a matter for physiologists and bio-chemists to decide. It is, however, deceptive, and this temperature-reducing action of alcohol in fevers may be compared to the pain-relieving action of morphia in acute abdomen ; and the latter is universally condemned ; at any rate, in infections, the withdrawal of the blood from, and the consequent ischaemia of, the vital organs that are engaged in an uneven conflict are not to be desired

* The dangers of simultaneous use of alcohol internally and cold externally in the treatment of fevers will be evident from this.

(to say the least), as they are tantamount to the cutting off of the food-supply and the means of communications in wars between nations, the grave consequences of which are well known.

Is the reduction in the temperature permanent? Certainly not. When the last dose of the drug has become decomposed (according to Higgins, the oxidation of alcohol normally begins in about 5-10 minutes after its consumption), the effects of alcohol naturally pass off and, with it, the *status quo* is reached back, to be disturbed only with the fresh dose of the drug. How far this ebb and tide, this agitation, is favourable to the body in its fight with the ravaging intruders, needs no edification.

Finally, as Hutchison remarks, " In large doses, * the general paralysis of the cellular activity which alcohol produces is so great that heat production is diminished at the same time as heat loss is increased, and the final result is a great lowering of the body temperature which may even amount to 15.° F."

Alcohol and Tissue-resistance.—" Alcohol was formerly advocated especially in septic conditions......A protest has recently been raised against the use of alcohol in these cases, on the ground that animals subjected to alcohol succumb more readily to infection than controls which have received no treatment, but this increased susceptibility does not seem to be induced by doses proportional to those in use in modern practice. In addition, the deleterious action may be more than compensated for by its value as a food and by its narcotic effects allaying the nervous irritability and promoting sleep; this narcotic action may very well be conceived to be of benefit to men, while actually prejudicial to animals." (Cushny).

" There are grounds also for the belief that alcohol actually increases the resisting power of the body to the poisons of certain diseases—such, for example, as septic fevers. I am aware that laboratory experiments † have

* The poisonous effects and the paralysis of the cells do not entirely depend on the dose, but on the amount of un-combusted alcohol circulating in the blood as such. " Throughout the body generally the presence of even a slight amount of undecomposed alcohol leads to a diminution of the chemical energy of the cells." (Hutchison).

† " Parkinson, as a result of experiments on the relation of alcohol to immunity arrives at the following conclusions. (1) Alcohol in small quantities has no action upon the phagocytic activity. (2) It has no action on the phagocytic activity until it is present in 12·5 % strength. (3) Small quantities of alcohol injected into rabbits may stimulate the production of antibodies temporarily. (4) A large dose of alcohol lowers the opsonic index for 24 hours. (5) Continuous moderate doses of alcohol cause a permanent lowering of the opsonic index. (6) The reacting mechanism to vaccines is much less effective in alcoholised rabbits than in normal rabbits; the difference is still more marked when living micro-organisms are used." (Hutchison).

shown that rabbits in a state of intoxication are actually less resistant than normal to certain organisms, such as the streptococcus of erysipelas, but the dose of alcohol administered was excessive; and, to set against these results, we have the clinical experiment of good observers, who regard alcohol as being actually an antidote to acute erysipelas." (Hutchison).

Opinions clearly differ, and the writer, from his own experience, is inclined to agree with those that regard alcohol as an agent that helps the marauders in infections.

Alcohol and Chronic Infections.—It can be said at once that alcohol, unlike in acute infections, is not a positive menace in chronic cases, though, if it can do any good is problematical. We shall revert to the subject when we discuss the symptomatic treatment. Suffice it to say here that, in chronic infections, any beneficial effects of alcohol on the patients is almost entirely due to the influence of the drug on digestion. Alcohol, though it offers no nutriment, act as a catalytic agent, increasing the secretions, improving the churnings by augmenting the movements of the stomach and the intestines, and accelerating the absorption—all together tending to bring about better digestion and possibly greater assimilation. But, to get the greatest benefit and the least harm from the drug, it should be given in minimum doses and well-diluted, as otherwise it will interfere with the digestion in the general depression it brings about.

Alcohol and Acute Infections.—It should be evident from what we have been considering till now that we cannot rely much on alcohol to set right a failing heart or to check the progress of serious sepsis, either directly as by dealing with the invaders or their auxiliaries, or indirectly as by bringing down the temperature beneficially. One may best sum up the therapeutic value of alcohol in acute fevers in the following words of Cushny, provided the drug be exhibited with all due precautions. "The action which lends alcohol its value in therapeutics is not its stimulant but its narcotic action, which allays the anxiety and distress of the patient, promotes rest and sleep and thus aids towards healing, or at the worst renders illness more tolerable. Small quantities of other narcotics might be substituted for alcohol, but none of them perhaps excels it in producing that spirit of hopefulness and restful confidence which contributes so much to recovery." In other words, the therapeutic value of alcohol in fevers consists in its charming power to make the patient oblivious of her sufferings and surroundings and not in its dubious power to spur her up to know more and more of them,nor—one needs hardly mention it— in its dangerous power to cast the patient in a deep sleep.

The foregoing should tell us the indication of alcohol in acute infections including those occurring during puerperium. The one condition where alcohol may be good and even turn the tide is the condition, where, as a result of the irritant action of the toxins on the cerebrum and perhaps also on the autonomous system, the patient is thrown into a state of violent and voluble delirium. Here, alcohol, by soothing the excited centres and calming the agitated patient through its narcotic action, will aid to effect a lessening of the muscular movements and slowing of the heart and respiration—all of which will lead to a greater conservation of the much-needed, *yet greatly reduced and highly mis-spent, energy. So then, the chief—if not* the only—indication of alcohol in acute infections lies in controlling the " high delirium "

Alcohol and Subsultus tendinum.—We saw before now that cases with high delirium may be benefited by alcohol. We shall see now that cases with low delirium, in spite of the high opinions to the contrary, can only be hastened to the grave. To understand these different behaviours of alcohol in the two conditions, one bas to remind onself of the pathological lesions underlying each which are never the same, but are poles apart. The fast loquacious delirium and the stiff forceful projections of the limbs met with in high delirium bespeak of irritation of cerebral cells in particular and perhaps to a less extent of all cells in general. On the other hand, the low muttering delirium and the toneless " twisting of cotton and threading of needle" found in low delirium are the effortless manifestations of the exhausted cells on the verge of paralysis. This difference in the pathology of the two conditions should give us the clue to the difference in their behaviour to alcohol. Cases of high delirium, being primarily cases of cellular irritation and " flush " and *with no great intrinsic impairment of the* cellular functions, it is quite possible that alcohol may do immense good here, as the drug has the power to allay all irritations by virtue of its narcotic action on the cells, and has further the power to remove the flush in the deeper vital organs by driving a greater quantity of blood into the alcohol unlocked superficial blood-vessels. But, in cases of low delirium born of cellular exhaustion, the cells being virtually inert, alcohol is not decomposed, but circulate in the blood as such. "Whenever the proportion of alcohol circulating in the blood becomes greater than the cells can decompose, its effects as a protoplasm poison become mainfest." Unfortunately in the type of cases we are considering, such manifestations take an extremely alarming turn. The anaesthetic action of the drug produces complete loss of sensibility in the already exhausted cells[3]; and the flow of blood into the newly unlocked superficial vessels results in the loss of even the little nutri-

ments the vital cells of the internal organs were getting before. The net result of all these is the production of a severe degree of cellular paralysis, involving such vital centres as the "driving centres" of the brain, "the centres of organic life which maintain the action of the heart and provide for respiration." Under such conditions, grave coma should be inevitable, and grim death should be at the doors.

It is but meet to add that the advocates of alcohol in "typhoidal state" do not recommend all of its kinds, but only those that are rich in volatile ethers; and, indeed, the brandy, the cognac and the like are used more for their ethereal effects than for any intrinsive virtue in alcohol itself. "In studying the general action of spirits on the body", says Hutchison (page 362), "one must distinguish carefully between the action of the alcohol itself and of the bye-products of fermentation which occur along with it......Their high alcoholic strengths render all forms of spirits valuable stimulants where the action of alcohol pure and simple is desired......In cases of profound nervous and cardiac exhustion, on the other hand, especially if delirium be present, one does not want merely an action upon the heart but that stimulating influence upon the brain and vital centres which the volatile bye-products seem to be alone capable of exerting......It is important, however, that these spirits should be old and well-matured, for it is only then they become really rich in ethereal bodies, and of the three (Rum, Whisky and Brandy), genuine liqueur brandy is perhaps the best ......There can be no doubt that its free and timely administration has saved many lives." The author further quotes Murray to have said, "It is when our patient is far beyond the region of controversy and life is in the balance, that I find a sphere of marvellous usefulness for the best liqueur brandy or in lieu of it very old cognac. Brandy or even whisky where the alcohol has been changed by age and original quantity into vinous and ethereal spirits, is almost a pure stimulant and hardly an intoxicant or narcotic at all."

All hail to good old cognac and genuine brandy, in deference to the views of the authors quoted. But the hitch comes when one begins to ascertain the age and maturity and estimate the ethereal contents of these. To quote only one author, Hutchison remarks (page 485) that the so-called brandy is no better than whisky, and further says on page 388, "The best brandy was originally produced in one of the richest wine districts of France (......or Cognac district). The quality varies with the character of the grapes, the best grapes yielding the variety known as Fine or Grande Champagne. This is the only genuine liqueur brandy. The varieties known

as Petite Champagne and Premiere Bois rank next to it......In a good year six or seven bottles of wine should yield one bottle of brandy. When first distilled the spirit is devoid of colour and of a fiery character. Improvement goes on for a long time, so that the older the brandy the better. After twenty or forty years it contains a considerable proportion of volatile esters and aldehydes to which some of the most valuable properties of brandy are to be attributed .....While the above is the origin of genuine brandy, it must be admitted that very little of the brandy sold in this country is so derived. The greater part of it is really concocted in the Cognac district from 'silent spirit' coloured with burnt sugar and flavoured with œnanthine or various essences. Such a product is entirely different from genuine brandy, for it contains but little of those volatile esters derived from wine which are so conspicuous in genuine Cognac, and to which......it owes most of the valuable results it is capable of producing in sickness." These words are from an Englishman and about the brandy obtained in England. One can very well imagine the kind of stuff we shall have the good or bad fortune to get in our privileged land, especially in the moffusal parts of it where retail business is the rule.

Such concoctions apart, are the genuine brandy and the like free from all taints of alcohol that they do not produce any narcotic or other alcohol effects on the devastated cells? No. In fact, and according to Hutchison (page 358), "It is the possession of volatile esters in large amount which mainly distinguishes brandy from whisky; as regards alcoholic strength the two are about equal."* And Cushny says, "Alcohol, even in smallest quantities, tends to lessen the activity of the brain."

All things considered one cannot help coming to the conclusion that, whether as brandy or as toddy, alcohol can do only harm in "windless"

*

——	Jamaica Rum	Scotch Whiskey	Typical 3-Star Brandy.
Alcohol per litre by volume ...	695·00	512·00	485 00
Alcohol in esters (not in total) ...	161·00	20·24	27·88
Esters (expressed as ethy acetate) ...	308·00	38·72	53·35
Aldehydes (as ethylic aldehyde) ...	15·41	14·38	6·10

The above are from the report of the Lancet Special Analytical Commission on Brandy, and reproduced in Hutchison (page 360.)

fatigue, whatever good it may show in reinless fury. The stray surprising successes obtained with it in such exceedingly severe cases, as where "the patient is far beyond the region of controversy and life is in the balance," are to be attributed more to the invisible help rendered by the "unknown soldier or soldiers" in the patient's own 'life forces' rather than to any helping spirit in alcohol. In fact—and if comparisons are not always odious—one may compare the action of alcohol in subsultus tendinum to that of strychnine in shock.

Alcohol, Its Administration.—The most important point for consideration in the use of alcohol in acute infections is the time of its exhibition. It has already been pointed out how Parkes and Wollowicz, as also those before and after them, have found that the temporary augmentation of the heart is soon followed by a depression even below the normal. This means that alcohol has no free gifts to offer, but, like an usurer, parts with its riches to rob more, and behaves, in cases of misuse, like the abused Shylock who smiled to stab later. Hence, as Hutchison has said, "This should be a warning not to begin the administration of alcohol too early...... lest one arrives at the period when no further stimulation is possible before the crisis is past." As regards the quantity of alcohol to be given and the frequency of its administration, a daily total measure of the liqueur fetching about 1½ ounces of absolute alcohol within 24 hours* may be prescribed with directions to be evenly distributed throughout the day and exhibited at intervals of one, two, or three hours as demanded by the urgency of the case. But, in the use of alcohol, there can be no fixed rule for routine adoption, for, the element of personal peculiarity plays a prominent part here, and indeed, one may legitimately doubt if, in the whole realm of drug idiosyncracy, there is any other instance where the personal factor plays so prominent and treacherous a part as in the case of alcohol. It is no good too to turn to books for guidance, for the action of alcohol can be described only under small, moderate and large doses, while, in actual practice, one frequently comes across a much less than a physiological dose working the havoc of a pathological one. It will be well to remember also that, in India, the fair sex are not yet in love with alcohol, cannot claim any uniform heritage and almost none on the maternal side. In deciding then the dose and frequency of the drug in any case, the guiding principle should be the patient's response to it. Sir William Whitlaw's † advice will be worth adopting. He advises to remain by the patient,

* It may be advisable to make the necessary allowance for the amount of alcohol the patient may be getting in the drugs and diets prescribed to her.

† See under 'Typhoid' in this author's 'Dictionary of Treatment'.

counting the pulse, and watching the tongue, the skin, the respiration and the general condition for quarter of an hour after a dose. Careful observations on these will tell us if alcohol is doing good or no in the particular case. It is doing good if it slows, strengthens and steadies a rapid, feeble, irrigular pulse, or quickens it when it is abnormally slow; renders a dry tongue and pungent skin more moist and less hot respectivelv; slows hurried respiration and removes apnoea; and lessens delirium and brings on sleep. "The results of excessive dosage," as Hutchison says, "will first usually manifest themselves in the digestive organs in the forms of flatulence, eructation and dryness of the mouth with the appearance of sordes on the lips" The other grave signs of undecomposed and undecomposable alcohol circulating in the blood are an angry bounding pulse or a wiry thready one, a waxing delirium or onset of coma, and the odour of the drug in the heavy and stretorous or sighing and long-drawn breath, and perhaps also on the skin. When these manifest themselves, there can be no question but that alcohol is offering no fuel, but hell-fire.

Alcohol, of course, will always be given diluted with an equal or twice the quantity of water (or preferably milk), depending on the alcoholic strength of the liquor used. And, no liquor will be exhibited in presence of contra-indications like kidney lesions.

Conclusion.—We may best conclude the utility of alcohol in acute infections in the following words of Sir William Whitlaw:* "Alcohol is given very freely by many in fevers and in acute diseases. .....Most authorities would probably agree (1) that alcohol is not necessary at all in the majority of cases; (2) that often unpromising cases pull through without it; (3) that in severe cases it cannot be safely withheld from those habituated to it; (4) that, occasionally, by the use of alcohol, life may be saved which would otherwise be lost; and (5) that it is rarely needed in the very large doses prescribed by some; 8 to 10 ozs. whisky may be regarded as representing a liberal daily allowance even in severe cases of fever."

* Pharmacy, Materia Medica and Therapeutics.

MEDICAL COUNCIL OF INDIA.*

SIR CUTHBERT SPRAWSON, MAJOR-GENL., I.M.S.,

New Delhi.

Dr. Young and Gentlemen,

I welcome you here to-day to the seventh session of this council. Unfortunately since our last meeting we have lost one of our number by the death of Col. Thorburn, a sitting member of the Council. Colonel Thorburn had long experience on the frontier of India, in Afghanistan and in the independent States of India, and he had but little more than a year ago been appointed to an office in the N. W. Frontier Province well suited to his administrative abilities. We shall miss Col. Thorburn from this Council and in many other ways. You will presently be invited to express your sympathy with his widow.

We welcome back to the Council Major-General Sir Frank Connor, now representing the Government of Madras and we welcome a new member in Lt.-Col Dimond the nominee of the Government of the North-West Frontier Province.

It is but three months since we last met; but there are a few matters of fresh interest and several items of former business of the progress of which the Council should be informed.

On the recommendation of this Council the Governor-General in Council has notified the inclusion of the M.B., B.S. degree of the Rangoon University on the first schedule of the Indian Medical Council Act of 1933.

A proposal has been made to the General Medical Council for the recognition for registration of the medical degrees of the Universities of Calcutta, Rangoon and the Punjab approved by this Council at their last session. This proposal will be considered by the executive committee of the General Medical Council at their meeting towards the end of the present month.

I explained at our last session the necessity of revising our recommendations on medical education and informed you that the draft revised recommendations had been sent to the universities for their remarks. All the universities have now replied and their observations have been sent to you with the agenda for this meeting. The recommendations of the executive

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* Presidential address delivered on February 12, 1937, at the seventh session of the Medical Council of India.

Received for publication February 18, 1937.

committee at their meeting yesterday have been laid on the table. I trust it will be possible for the Council to consider these recommendations to-day.

As directed by the Council at their last session the inspection of the Andhra University including final examinations has been carried out by our inspector and the reports thereon were considered yesterday by the executive committee. The executive committee decided to recommend to the Council the further postponement of the recognition of the degrees of Andhra University. The reports of the inspectors and the comments of Andhra University thereon will be sent to members of the Council so that the Council may consider them with the executive committee's recommendation at a subsequent meeting.

A communication was received from the Andhra University suggesting a provision in the Act that a member representing a university should cease to be a member of the Council, should he for any reason cease to be a member of the Faculty of Medicine of that university. Such a change would require an amendment of the Act and the proposal of Andhra University is one of the points that should be considered later on if and when Government may undertake the revision of the Act.

There are two other matters with which the executive committee have concerned themselves. One is about the teaching of obstetrics. The executive committee have addressed a questionnaire to all the universities asking information on several details of the practical instruction given in this subject. Their replies are awaited.

The other matter is the important one of the pre-medical scientific subjects. The executive committee consider that if these subjects were more efficiently taught by the science colleges and taught also with a definite understanding that the student has a medical career in view it should be unnecessary for a medical college to teach them over again and to hold a pre-medical test examination. At our request the universities have furnished information about the courses of study and the examinations held by them for purposes of entry to their medical course, but we find the information insufficient and are addressing these examining bodies directly for further details of their syllabi and the nature of their practical classes. We anticipate it will be necessary later to make an inspection of some of these courses.

Other inspections have also been the subject of your executive committee's consideration. We have now completed the first inspections of the courses of study and the final examinations of all the universities of British

India that have Medical Faculties and it has been considered whether the the time has now come to inspect not only the pre-medical scientific subjects already referred to, but also the medical scientific subjects, such as anatomy, physiology, and the instruction in these subjects, in greater detail. The executive committee yesterday decided that inspections of courses and examinations in the subjects of anatomy, physiology and pharmacology should be made, beginning during the present year, and they have selected inspectors to that end.

A request was received from the Mysore Medical Council for the recognition under Section 13 (1) of the Indian Medical Council Act, 1933, of the degree of M.B., B.S. of the University of Mysore. The executive committee decided to inform the Mysore Medical Council that necessary preliminary to recognition by the Medical Council of India of this degree would be the inspection by our inspectors of the courses of study, examinations and facilities for teaching of the Mysore University and we enquired whether the University would be agreeable to such an inspection. In reply, the Mysore Medical Council have forwarded a copy of a letter from the Registrar, Mysore University, to them, stating that the question of inviting inspection would be considered after the extension and improvements now in progress in the Medical College, Mysore, were completed.

The regulations proposed for this Council will be before the present session. They have been the subject of long consideration both by Government and by this Council and it is hoped that the present session will see them at last in finished form.

I referred at some length at our last session to our foreign relationships particularly those with the Portuguese and French Indias.

It is satisfactory to know that the Portuguese Government have re-introduced the reciprocity formerly existing between Portuguese India and some of our provinces. This means that medical men passed out by any of the universities of the presidencies of Bombay, Madras and Burma or licensed by the College of Physicians and Surgeons of Bombay, or those passing degrees higher than the last mentioned College obtained in the said Bombay Presidency, or even who have medical qualification of the schools of Burma equivalent to the course of the Medical and Surgical School of Nova Goa, can exercise their profession in this colony.

As regards French India the executive committee have decided to represent the case to the Governor of French India. Before doing so, they have asked for the views, of the provincial medical councils as to whether

they wish to have reciprocity with French establishments in India, and if so, on what conditions and also what action, if any, they propose in case the reciprocity is not agreed to by the French authorities. Replies are still awaited from most of the provincial medical councils. This matter will come before the Council with the recommendations of the executive committee in due course.

I reported also to you at our last session that we had entered upon our duties under Section 13 of the Act and were in correspondence with the authorities in other countries, especially with those whose degrees are already on our second schedule. The negotiations have continued and though I do not intend at this moment to state the stage we have reached in regard to each country, I will review briefly the general position. The countries whose degrees are on our second schedule are other parts of the British Empire, and Italy and Japan. We have been in correspondence with the authorities of Ceylon, Hong-kong, the Straits Settlements, Malta, Newfoundland, New Zealand, South America, New South Wales, South Australia, Victoria, Alberta, Manitoba, the North West Territories of Canada, Nova Scotia, Prince Edward Island and of Italy and Japan.

We have received no reply from Japan and with Italy our negotiations are delayed pending the conclusion of a new agreement. Hitherto only the holders of degrees on the British register have been entitled to recognition in Italy; but in future the accession of India to the new agreement is to be provided for separately on a basis of equal reciprocity between Italy and India. We can serve no useful purpose meanwhile by approaching any authority in Italy.

From the other countries I mentioned the replies, in cases where the correspondence has been completed, have been, as I indicated at our last session, usually on the lines that they will recognise only those of our degrees that have received the recognition of the General Medical Council. I wish you earnestly to consider this matter and its implications, because you will be required to give a decision thereon at our next meeting. Unless you specifically recommend to the Governor-General that degrees which are on our second schedule should remain thereon they will automatically be removed after next October. If you allow the degrees of one of the countries I have mentioned who are prepared to recognise our approved qualifications only via the General Medical Council to be removed from our schedules the position would arise that graduates of Indian universities would be recognised in that country; but their graduates would not be recognised in India. At your next meeting you should have before you the

recommendations of the executive committee on this subject and a precis of the replies from the countries concerned.

Most of the countries not on our second schedule with whom we have corresponded have no degrees of their own or at least no qualifications generally recognised; but they are of interest to us because Indian practitioners sometimes go there. They are Kenya, Tanganyika Uganda, Zanzibar, British Guiana, Mauritius, Fiji, Iraq and Iran. Where correspondence has been concluded the replies vary from an inability to recognise any thing not recognised by the General Medical Council to an acceptance in one case, Tanganyika, of the degrees included in our first schedule and approved by this Council.

With both Iraq and Iran the position is different, but I should not detain you now to describe the peculiarities of these individual countries.

Our proceedings for the engagement of a new secretary to the Council from next November have been the subject of correspondence with the Government of India, and this matter will come before you to day as a separate item.

This is the last session of this Council at which I shall have the honour to preside and the last occasion at which I shall have the opportunity of meeting many of the members of this Council. It is a matter of great satisfaction to me that this Council has been able to do so much directly and indirectly in the ways that I described at our last session towards the objects for which the Council was established and I thank you for your cordial co-operation in the work we have performed. I thank more particularly the members of our executive committee who have given freely their time and experience to the benefit of the Council and especially I thank our secretary, Colonel Burke, for the careful way he has always prepared the matter for our deliberation and his office staff for their able assistance at all times.

My successor as president for the next year will be Major-General Bradfield, an officer known already to several among you and one who has already had experience of provincial medical councils in two of the presidencies of India. I feel assured that you will accord to him the support you have generously given me and you too may rest assured that my concern in this Council and its work will not cease with my resignation therefrom, but I shall always follow the Council's proceedings with eager interest and will be ready to assist the Council's just ends if opportunity allows me to do so.

I thank you and wish you good-bye, and that the Medical Council of India may flourish and achieve its objects.

CONNEMARA
26 APR 1937
MADRAS

JOURNAL OF SOUTH INDIAN MEDICINE

APRIL 15, 1937.

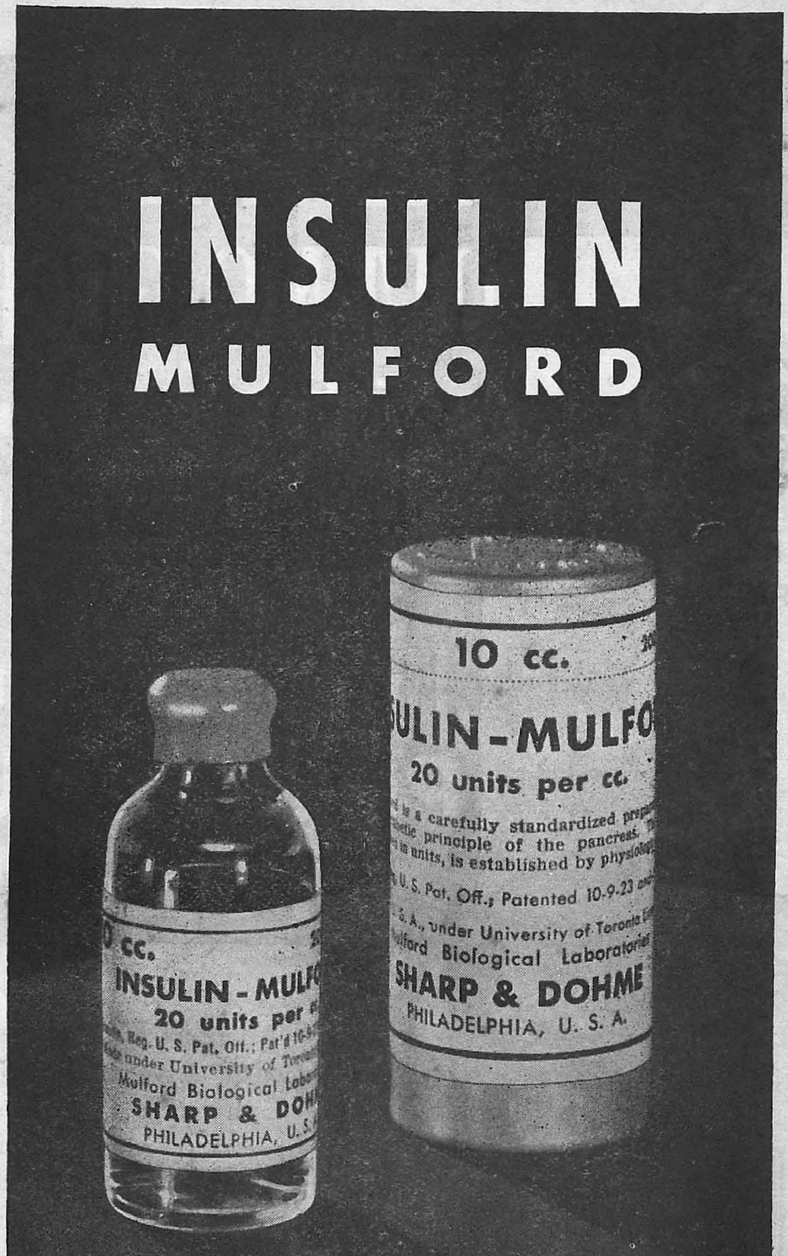
THE INDIAN MEDICAL SERVICE

Great hopes were raised at the First Round Table Conference that medical relief in this country was going to be organized on an intelligent basis. Years passed and the Government of India Act which was considered to be a very difficult piece of legislation became an established fact. But the question of the reorganization of medical relief was found to be even more difficult than this Act itself. After a long wait and many alarming rumours the scheme was published at the end of March 1937. Since then, the press and the public have condemned it. With the gesture of a successful salesman the Government want this country to admire the courage with which they have agreed to reduce the number of I. M. S. officers in civil employ. With the impartiality which they always manifest they have so arranged that the European officers in civil employ are in fairly large numbers. It is true that ultimately the number of I. M. S. officers will be less than what it is now. But it will take some time before the new figures are reached. This is the only flaw in the arrangement. But Indians are unreasonable. They magnify this little evil—apparently a very necessary evil—while they ignore the great boon that has been conferred in the shape of the marked reduction in the Indian nationals of the I. M. S. Lest the people should attribute recial bias, the Local Governments are given complete liberty to increase the number of Indians to their hearts' content.

The objections to the I. M. S. in this country have been, firstly, that the Civil medical needs are made to depend on the army department and, secondly, that Britishers are employed in the medical department simply because they are Britishers. Before discussing this question, it is advisable to get clear of a

few misconceptions. When the perpetuation of the I. M. S. is questioned, we are told that this Service has done glorious work towards Medical Relief and as such that it would be wrong to abolish this service. It is not necessary to go into the question whether the organization of medical relief and education in the country was best in the then existing circumstances. But it is agreed on all hands that the I. M. S. has done very well indeed in the various duties allotted to it. They have organized medical education and relief with great credit In the investigation of diseases, in the improvement of public health and sanitation, and in the organization of medical education the present excellent position is entirely due to the I. M. S. It is good to be clear about this. When this service is criticised now, it is not because the people are unaware of these qualities. Even the most ardent admirers of this Service, cannot deny that its usefulness is gone, not because the members are less competent, but conditions have changed here. Having organised the Medical Department, Schools and Colleges, they have brought up a large number of Indians of distinction in the profession. The question therefore is whether there is need for the requisition of the services of British medical men to satisfy the needs of medical relief of this country.

The arguments against the perpetuation of the I. M. S. are thoroughly familiar. They have not been satisfactorily met by its supporters. They put forth two reasons. It is claimed that it is economical for the country to have the Army Medical Reserve in civil employ. If this were so, why is it that no other country has adopted this plan? The I. M. S. officers, Indians and Europeans, are paid far more for their work than members of the Civil Medical Service. We are sure nobody would suggest that the medical men in civil employ of the Province are less capable or less equipped than officers of the I. M. S. The other reason is, that British Civil servants prefer British doctors. Is this true? We know at least one Province where Non-British doctors are very popular with the British residents, inspite of the fact that a number of British doctors of the I. M. S. are available in the area. The protagonists of the "British doctor



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for British men and women in India" theory might put this in their pipes and smoke it.

It therefore comes to this, the Government for some reason or no reason wish to have a large number of British doctors in this country. They have the power to appoint them and they do it. But we find a new danger. We are thankful that at least the number of Indians in the I.M.S. has been reduced. But this reduction of the number of the Indians seems to have produced a curious reaction in the public mind. They forget that they have been condemning the system of appointing I.M.S. officers to Civil Medical positions, irrespective of the racial factor. They are hurt that the Indians have been sacrificed to safeguard the privileges of the Europeans, and they seem to emphasize the reduction in the number of Indians as the main grievance. This attitude is promptly taken note of and the suggestion is most alluringly thrown out that the Provincial Governments can appoint any number of Indians.

In the face of an attempt to discriminate against Indians there is often a fatal inclination among public men to succumb to the suggestion that the interests of Indians should be protected. This is perfectly legitimate. But this sentiment should not be allowed to override public interests. In the discussion over this question of the I.M.S. the needs and interests of the sick public is hardly ever thought of. Organization of medical relief is first and chiefly in the interests of the public. But a perusal of the controversy suggests that it is the interests of the Services that are dominant. Whether there be more Europeans or less Indians is hardly the concern of the sick. But they do require and wish for adequate and efficient medical help. If the Provincial Governments would only act on this principle, namely, to spend their resources on the enlargement of provision for medical relief to the greatest possible extent, consistent with efficiency, the question of 'British' *versus* 'Indian' might be allowed to recede to the background. Under such conditions it would need an audacity of an unusual hardness to suggest that the I.M.S is essential for Civil needs and that Britishers are needed in large numbers.

The South Indian Medical Union.

ANNUAL GENERAL MEETING.

The Annual General Meeting of the Union was held on Monday the 15th March 1937 at 32, Broadway, Madras. It is gratifying to note that inspite of a certain amount of slackness which was apparent in the affairs of the Union, quite a large number of members were present and took active interest in the business of the meeting.

Tea was provided by the President Dr. E. V. Srinivasan. After the tea the meeting was held with Dr. E. V. Srinivasan in the chair. The President in his introductory remarks referred to the various causes which were responsible for the difficulties in the working of the Union and hoped that with the election of the new office-bearers, most of the difficulties will be set right and the Union would once again function as energetically as before.

The Secretary submitted the Annual Report. Dr. M. Sanjiva Rao started the discussion on the consideration of the Report. He referred to the decrease in the subscriptions collected and pointed out that the expenses were gradually increasing. He questioned the wisdom of continuing the publication of the Journal of the Union. He said that the cause of the independent Medical Practitioners was not sufficiently espoused in the columns of the Journal. Dr. P. Rama Rao said that the fall in the subscription was not due to the fault of the Secretaries, but was chiefly owing to the difficulties of collection. Absence of Clinical Meetings was due to the unwillingness of the members to come forward with papers and demonstrations. Dr. U. K. L. Narayana Rao said that the Journal did not take into consideration the needs of all the members of the Union. Dr. Thambiah said that he had great experience in running Journals and pointed out to the meeting the very real difficulties met with by those responsible for the publication. The adoption of the report was but to the vote and was carried by a large majority.

The meeting next went on to the election of office-bearers. Dr. M. Subramania Iyer was elected President, Drs. U. Rama Rau and V. D. Nimbkar as Vice-Presidents, Dr. T. Satakopan as General Secretary and Dr. V. C. Sudarsanam as Joint Secretary. All the Office-bearers were

elected unanimously. The names of Dr. Devaji Rao and Dr. U. K. L. Narayana Rao were proposed for the Joint Secretaryship, but they declined to accept it.

The following gentlemen were elected as members of the Council.

1. Dr. B. M. Sundaravadanam.
2. „ C. R. Krishnaswami.
3. „ E. V. Srinivasan.
4. „ P. Rama Rau.
5. „ J. M. Colaco.
6. „ P. Govinda Rau.
7. „ S. Thambiah.
8. „ K. C. Paul.
9. „ George Zachariah.
10. Major M. R. Grandhi.
11. Dr. M. Krishnamurthi.
12. „ M. Sanjiva Rao.

The meeting next proceeded to consider the resolutions of which notice was given by some of the members. Dr. M. R. Bail moved that the South Indian Medical Union be abolished and that the members be requested to join the Madras Branch of the Indian Medical Association. Dr. M. Sanjiva Rao seconded it. Several members took part in the discussion. The resolution was lost by a unanimous vote against it. Dr. M. Sanjiva Rao next moved his resolution that the South Indian Medical Union be affiliated to the Indian Medical Association. Capt. V. D. Nimbkar seconded it. Dr. K Bhujanga Rao, Dr. S. Thambiah, Dr. U. D. Gopal Rao, Dr. G. S. Katre and others took part in the discussion. Dr. Sanjiva Rao withdrew his resolution finally.

Dr. Satakopan proposed a vote of thanks to the President. He requested the members present to take active interest in the activities of the Union and to feel that the Union belonged to every one of the members and to the profession and not to go away with the idea that the office-bearers only should work for it and others be merely spectators.

Dr. C. R. Krishnaswami proposed a vote of thanks to the out-going Secretaries and office-bearers.

Report of the working of the Union for the period ending 28th February 1937

with Financial Statement for the year ending 31st March 1936

THE COUNCIL

PRESIDENT

E. V. Srinivasan

VICE-PRESIDENTS

U. Rama Rau

T. Satakopan

MEMBERS

V. Govindarajulu
P. Govinda Rau
K. R. C. Hebbar
M. Krishnamurthi
C. R. Krishnaswami
K. L. Narayana Rau
P. Natesan
S. Rajagopal
M. Sanjiva Rau
B. M. Sundaravadanam
U. Venkata Rau
G. Zachariah

SECRETARIES

P. Rama Rau (*Social and Scientific*)
K. C. Paul (*General*)

REPORT

MEMBERSHIP

During the period under review there were three additions to membership, and one ordinary member resigned from the Union.

FINANCE

The financial statement up to the end of March 1936 as certified by the auditor is herewith appended.

MEETINGS OF THE COUNCIL

Four meetings of the Council were held since the last annual meeting held on November 21st 1935.

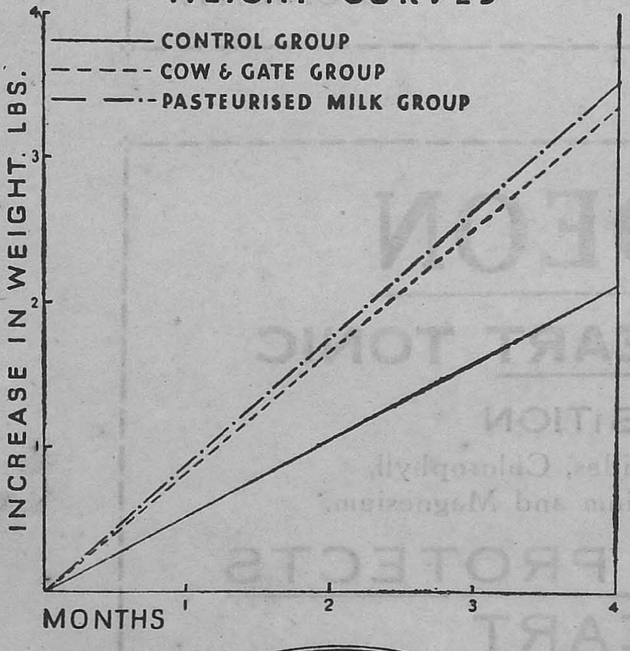
Growth-producing factors in Roller Milk Powder

It has often been suggested that the heat process employed in powdering milk by the Roller Process must necessarily involve damage to the growth-promoting factors in milk.

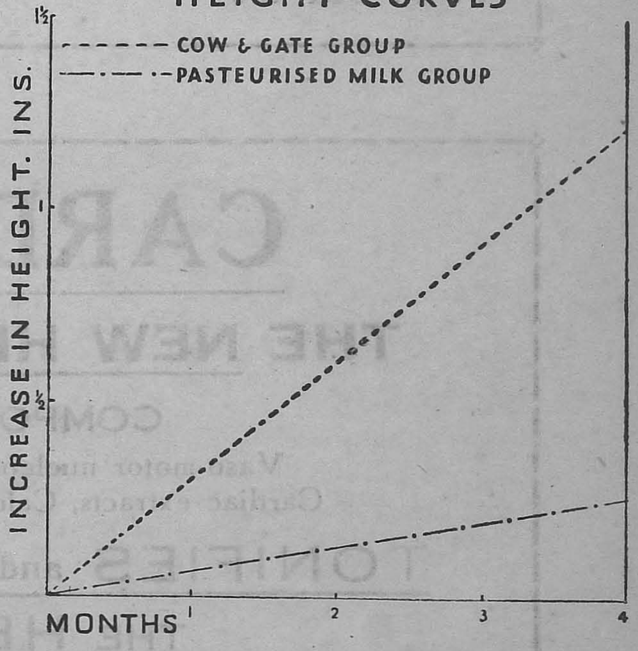
A recent experiment at the Princess Beatrice Centre, Fulham, demonstrates that an additional ration of milk to the home diet resulted in an increase in height and weight, and, in the case of the group fed on Milk Powder, a marked increase in height.

Cow & Gate Milk Powder was used in this social experiment, which has demonstrated that the Improved Roller Process, with its rapid heat treatment, does not damage the growth-promoting factors, vitamins, and soluble calcium in the original fresh milk.

WEIGHT CURVES



HEIGHT CURVES



MANUFACTURERS OF THE
Cow & Gate Milk Food
CELEBRATED COW & GATE MILK FOOD

COW & GATE LTD.

GUILDFORD, ENGLAND

Agents for India: CARR & CO. LTD., Ballard Estate, Bombay; and at Calcutta, Karachi and Madras.

Full information of the Cow & Gate Improved Roller Process used in the preparation of all the Cow & Gate Milk Foods and clinical samples of these will gladly be sent on request. We should like you particularly to try our new product, Chocolate Milk which is especially suitable for the growing child.

CALOGLAND

STIMULATES

GASTRIC-HEPATIC ACTIVITY

Under the influence of Calogland digestion is improved, liver activity stimulated and the flow of bile is improved both in quantity and quality. Elimination of waste matter is more complete and thus the absorption of toxic matter from the gastro intestinal region is reduced.

COMPOSITION :—Calomel, Stomach Extract, Liver Extract, Oil of Peppermint.

DOSE :—3 to 6 tablets daily.

Bottles of 48 Tablets.

The Anglo-French Drug Co. (Estn.) Ltd.,
P. O. Box 460 — BOMBAY.

CARDEON

THE NEW HEART TONIC

COMPOSITION

Vaso-motor nucleosides, Chlorophyll,
Cardiac extracts, Calcium and Magnesium.

TONIFIES and PROTECTS THE HEART

2, 4 or 6 tablets per day
taken between meals.
Bottles of 48 tablets.

The Anglo-French Drug Co. (Estn.) Ltd.,
P. O. Box 460 — BOMBAY.

General Meeting

An extraordinary general meeting was held on July 19th 1936 to consider the situation arising out of G. O. No. 877 Ms. PH., dated 3rd July 1936.

Clinical Meetings

Seven clinical meetings were held as shown below :

1. 9th January 1936. The recent epidemic of Malaria in Ceylon (1934-35). By Dr. J. A. Iswariah.

2. 23rd January 1936. The dieting of the sick. By Dr. K. C. Paul.

3. 30th January 1936. Demonstration of cases. By Dr. P. S. Varadarajan.

4. 5th March 1936. Gastric haemorrhage. By Dr. T. Satakopan.

5. 26th March 1936. Some surgical emergencies. By Dr. B. M. Sundaravadanam.

6. 29th April 1936 Demonstration of cases of Ophthalmological interest. By Dr. E. V. Srinivasan.

7. 27th August 1936. Report on some cases of tumours treated by Radio-Therapy at my clinic. By Dr. P. Rama Rau.

Journal of South Indian Medicine

The publication of the Journal has been very irregular. This was mainly due to the dearth of matter. Because of this irregularity of publication the advertisement revenue fell off considerably.

The Journal received the following periodicals in exchange :

1. The Antiseptic, Madras.
2. The Birmingham Medical Review, Birmingham.
3. Bombay Medical Journal, Bombay.
4. The Bristol Medical Surgical Journal, Bristol.
5. The Bulletin of the Academy of Medicine of Toledo, U. S. A.
6. The Burma Medical Times, Rangoon.
7. The Calcutta Medical Journal, Calcutta.
8. General Practice, London.
9. Illinois Medical Journal, U. S. A.

10. Indian Journal of Pediatrics, Calcutta.
11. Indian Journal of Venereal Diseases, Bombay.
12. The Indian Medical Gazette, Calcutta.
13. The Indian Medical Journal, Madras.
14. The Indian Medical Record, Calcutta.
15. Journal of the Andhra Medical Association, Bezwada.
16. The Journal of Ayurveda, Calcutta.
17. The Journal of Bone and Joint Surgery, Bostcn, U. S. A.
18. The Journal of Clinical Research, London.
19 The Journal of the Indian Medical Association, Calcutta.
20. The Journal of the Madura Medical Association, Madras.
21. The Journal of the Stanley Medical School, Madras.
22. King George Medical College Clinical Society Journal, Lucknow.
23. The Madras Medical College Magazine, Madras.
24. The Medical Bulletin, Bombay.
25. Medical Digest, Bombay.
26. Medical Practitioner, Madras.
27. Medical Press and Circular, London.
28. Medical Times, New York, U. S. A.
29. The Medical World, London.
30. The Medico-Surgical Suggestions, Madras.
31. Miscellany of the Trichinopoly District Medical Association, Trichinopoly.
32. The Patna Journal of Medicine, Patna.
33. The Practitioner, London.
34. The South African Journal of the Medical Sciences, S. Africa.
35. Seth G. S. Medical College Magazine, Bombay.
36. The Sind Medical Journal, Karachi.
37. South Western Medicine, U. S. A.
38. Texas State Journal of Medicine, Texas, U. S. A.
39. Travancore Medical Journal, Trivandrum.
40. The Vaidya Sarathy, Kottayam, Travancore.
41. The Vizagapatam Medical College Magazine, Vizagapatam.
42. West London Medical Journal, London.

ACKNOWLEDGMENTS

Dr. E. V. Srinivasan has once more placed the Union under a deep debt of obligation to him by permitting the use of his premises at 32, Broadway, for the activities of the Union.

The Union is indebted to Mr. K. Gopalakrishna Rau, Accountant and Auditor, for kindly auditing the accounts of the Union for the period ending March 1936 free of all charges.

THE SOUTH INDIAN MEDICAL UNION, MADRAS.

Receipts and Disbursements for the year ending 31st March 1936.

RECEIPTS.	Rs. A. P.	Rs. A. P.	PAYMENTS.	Rs. A. P.	Rs A. P.
To Balance on 1-4-35,			By Publicity Section ..		1,957 10 6
On hand ...	85 12 6		,, Establishment ...		305 0 0
With Indian Bank Ltd. C/A ...	512 0 6		,, Postage, Stationary etc. ...		79 10 3
With Indian Bank Ltd. S/B ...	1,039 8 3	1,637 5 3	,, Bank charges ...		11 15 0
			,, Sundries ..		13 1 3
,, Publicity Section ...		1,512 6 8	,, Balance ...		1,240 8 9
,, Subscriptions ...		440 0 0	On hand ...	56 13 0	
,, Bank Interest ...		18 1 10	With Indian Bank Ltd. C/A ...	126 1 8	
			With Indian Bank Ltd. S/B ...	1,057 10 1	
Total ...		3,607 13 9	Total ...		3,607 13 9

Examined and found correct.

5, ERRABALU CHETTY STREET,

10th March 1937.

K. GOPALAKRISHNA RAU, B.A.,

Accountant and Auditor.

K. C. PAUL,

P. RAMA RAU,

Hon. Secretaries.

E. V. SRINIVASAN,

President.

DORALGIN

J.D.Riedel-E.de Haën A.G. Berlin

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Stock and Autogenous Vaccines prepared.

Sterile Solutions for injection always in stock.

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92·5 per cent of Medical men do not read the advertising literature sent to them but rely entirely on the advertisements in their **own journals.**

Reach the Independent Medical Profession of South India through its

JOURNAL.

ASSOCIATION NOTES

THE KISTNA DISTRICT RURAL MEDICAL PRACTITIONERS' ASSOCIATION

An ordinary meeting of the above Association was held at Masulipatam in the District Medical Officer's office premises on Sunday the 24th January 1937 at 4-30 P.M. when Lt.-Col. K. V. Ramana Rau, I.M.S., District Medical Officer prisided. Mr. N. Rama Rau, L.M.P., Secretary, after reading of the minutes of the previous meeting which were duly adopted put forth the following resolutions which were unanimously passed by the members.

I. This Association requests the Government to continue the usual subsidies for the Rural Medical Practitioners when they are sent for Refresher courses.

II. This Association thankfully receives the proposal of Dr. V. Rama Kamath of Madras in suggesting Dr. Vittal Pai of Pallavaram to succeed late Dr. S Rama Subbu to officiate as Honorary Secretary of the Madras Provincial Rural Medical Practitioners' Association and requests them both to arrange to call for a provincial meeting as early as possible to formally elect Dr. Pai as Secretary. Then there was a discussion between the members and the President about the disabilities of Rural Practitioners and the meeting came to a close by 5 P.M. after which the Kistna District Medical Association had their proceedings in the same place

THE MEDICAL PRACTITIONERS' ASSOCIATION, NUZVID

A monthly meeting of the above Association was held at Agripalli on Sunday the 31st January 1937 at3-30 P.M. with Dr. S. Hanumantha Rau in the chair. Mr. A. Venkateswara Rau, the local Rural practitioner, was at home to the members. The meeting commenced with prayer after which minutes of the previous meeting were read by the Secretary Mr. N. Rama Rau which were duly adopted. The members had a long discussion over several clinical cases of professional interest of which some were the following :—

1. Mr. Venkateswara Rau read his case notes upon a case of female suffering from chronic suppurative bronchitis and also another case which

he thought to be one of chronic appendicitis. On discussion, the latter case was decided to be one of faecal concretions simulating appendicitis.

2. Mr. N. Rama Rau read case notes upon 5 cases of tuberculosis of which three were primarily intestinal in origin and later developed lung infection, one was multiple cold abscesses and the other purely tuberculosis pulmonum. In all these cases though the first three were well advanced and of grave prognosis, and later on proved fatal he administered unckaloubi extract and he claims to have relieved the toxaemic symptoms and all the patients felt a sensation of well-being. He further said these few cases stand no conclusive proof of the efficacy of the drug, it is worth a trial in cases of tubercle

3. Mr. S. Hanumantha Rau narrated the history of a case of pulmonary tuberculosis, that started with fever typical of Malaria (no blood examinations done) and later on developed cough and lung affection.

The meeting came to a close by 6-45 P.M.

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION, PALAMCOTTAH

The Tinnevelly District Medical Association held its monthly meeting on Saturday the 25th of February 1937. In the morning a Health Exhibition was arranged at the Board High School, Nanguneri. The Exhibition was opened by Lieut.-Col. T. S. Shastry, I.M.S , the President of the Association. The Exhibition was kept open to the public till late in the evening. The exhibits consisted of posters relating to Cholera, Tuberculosis, Malaria, Small-box, Fly-danger, etc. About 300 School teachers and School Mistresses of Nanguneri Taluk attended the Health Exhibition which was held at the same place and along with the Educational Exhibition of the Elementary School Teachers' Conference. Leaflets on Venereal Diseases kindly supplied by the National Health Association of Southern India, Madras, were distributed to all of the teachers, mistresses, etc.

The monthly meeting of the Association was held at 4-30 p. m. with tea and music on the veena at the Traveller's Bungalov, Nanguneri, under the Presidentship or Lieut.-Col. T. S. Shastry, I.M.S. Thirty members of the Association were present on the occasion.

The following resolution regarding the demise of Dewan Bahadur Dr. C. Natesa Mudalir, L.M. & S., was passed unanimously : —

"The Tinnevelly District Medical Association places on record their sorrow at the demise of Diwan Bahadur Dr. C. Natesa Mudaliar, L.M. & S., M. L. C., one of the most promient and respected members of our Profession who did silent and loving service to the sick poor, and one of the most useful citizens of our Presidency, and conveys to the bereaved family their heartfelt sympathy."

The Secretary and Treasurer Dr. K. Rama Ayyar, M.B.B.S. (Andhra) read the minutes of the Eighth Anniversary of the Tinnevelly District Medical Association, which were passed.

The following interesting specimen was shown to the members :—

By whom.	Specimen.
Lieut. Col. T. S. Shastry, I.M.S.	Dermoid Cyst (left ovary) with balls of Hair.

The following interesting cases were demonstrated :—

By whom.	Cases.
Lieut.-Col. T. S. Shastry, I.M.S.	Syphilitic Gastritis.
Dr. M. Vaithianathan, L.M.P.	Tubercular peritonitis.
Dr. G. S. Narayana Iyer, L.M.P.	Aphasia (Chronic).

Dr. P. S. Srinivasan, L.M.P, sub-assistant surgeon of the Government Headquarters Hospital, Palamcottah, read out the following interesting cases :—

(*a*) Myxodema and cretinism (in one and the same family),

(*b*) Strangulated Hernia with a tumour on the pelvic colon,

(*c*) Syphilitic Gastritis and

(*d*) An early case of Mycetoma foot.

Dr. M. Vaithianathan of Nanguneri read clinical notes of a case of tubercular peritonitis. Dr. G. S. Narayana Iyer read out his notes of the case on Aphasia.

After detailed discussion by the members, Lieut.-Col. T. S. Shastry, I.M.S., summed up the salient and important features of all the cases. He offered his cordial thanks to all those members who helped towards the success of the function and thanked Dr. M. Vaithianathan, for the excellent arrangements.

Thereafter, an excellent Dinner brought the happy gathering to a close late at night

JOURNAL OF SOUTH INDIAN MEDICINE

NOTICE

CONTRIBUTIONS of medical interest—original articles, case notes, clinical memoranda—are invited. They should be addressed to the EDITOR, JOURNAL OF SOUTH INDIAN MEDICINE, VEPERY, MADRAS, and should be accompanied by a stamped addressed envelope if their return is desired in case of non-publication.

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Books and pamphlets for review should be sent to the Editor, who will be pleased to receive also reprints of which abstracts will be of interest to the profession. Journals for exchange or review should be addressed to the Publicity Officer.